

FIGURE 1A

Amino acid sequence of human CCR5 [SEQ ID NO: 1]:

1 MDYQVSSPIY DINYYTSEPC QKINVKQIAA RLLPPLYSLV FIFGFVGNML VILILINCKR
N-Terminus Transmembrane Domain 1

61 LKSMTDIYLL NLAISDLFFL LTVPFWAHYA AAQWDFGNTM CQLLTGLYFI GFFSGIFFII
LOOP 1 Transmembrane Domain 2 Loop 2 Transmembrane Domain 3

121 LLTIDRYLAV VHAVFALKAR TVTFGVVTSV ITWVVAVFAS LPGIIFTRSQ KEGLHYTCSS
Loop 3 Transmembrane Domain 4 Loop 4

181 HFPYSQYQFW KNFQTLKIVI LGLVLPLLVM VICYSGILKT LLRCRNEKKR HRAVRLIFTI
Transmembrane Domain 5 Loop 5

241 MIVYFLFWAP YNIVLLLLNTF QEFFGLNNCS SSNRLDQAMQ VTETLGMTHC CINPIIYAFV
Transmembrane Domain 6 Loop 6 Transmembrane Domain 7

301 GEKFRNYLLV FFQKHIAKRF CKCCSIFQQE APERASSVYT RSTGEQEISV GL
C-Terminus

FIGURE 1B

Peptide fragments derived from human CCR5 that are used as target peptides:

N-terminal fragment [SEQ ID NO: 8]:

MDYQVSSPIYDINYYTSEPCQKINVKQIAARLLPPL

Loop 4 fragment [SEQ ID NO: 9]:

TRSQKEGLHYTCSSHFPYSQYQFWKNFQTLKI

Loop 6 fragment [SEQ ID NO: 3]:

EFFGLNNCSSSNRLDQAMQVTETLGMTHC

FIGURE 1C

A model of the secondary structure of human CCR5:

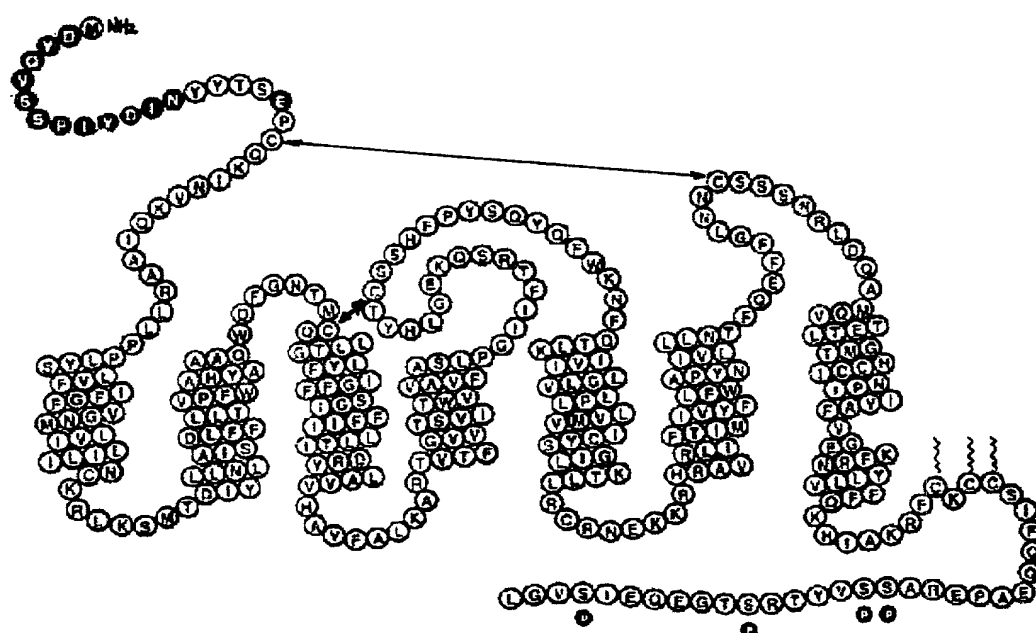


FIGURE 2A

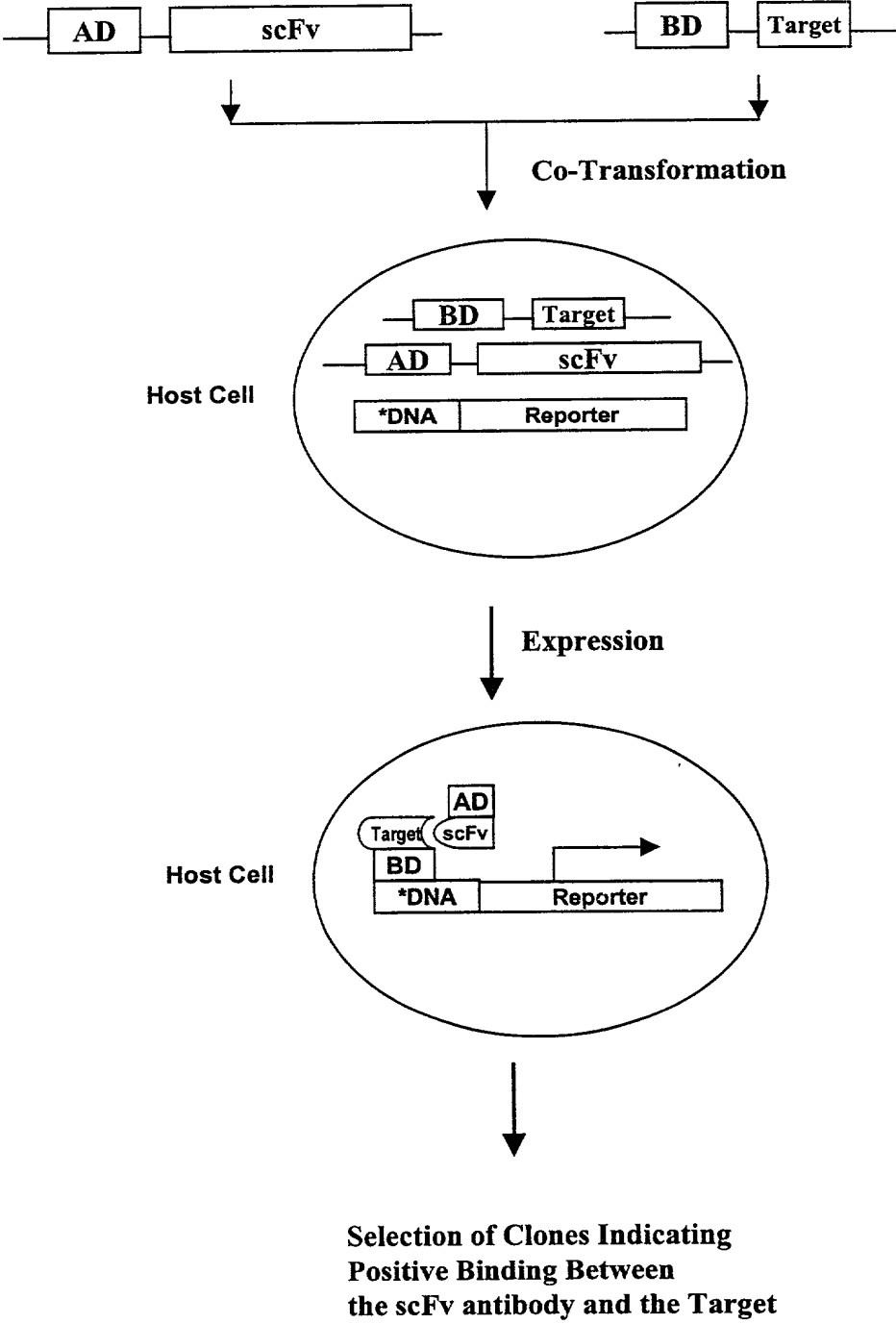


FIGURE 2B

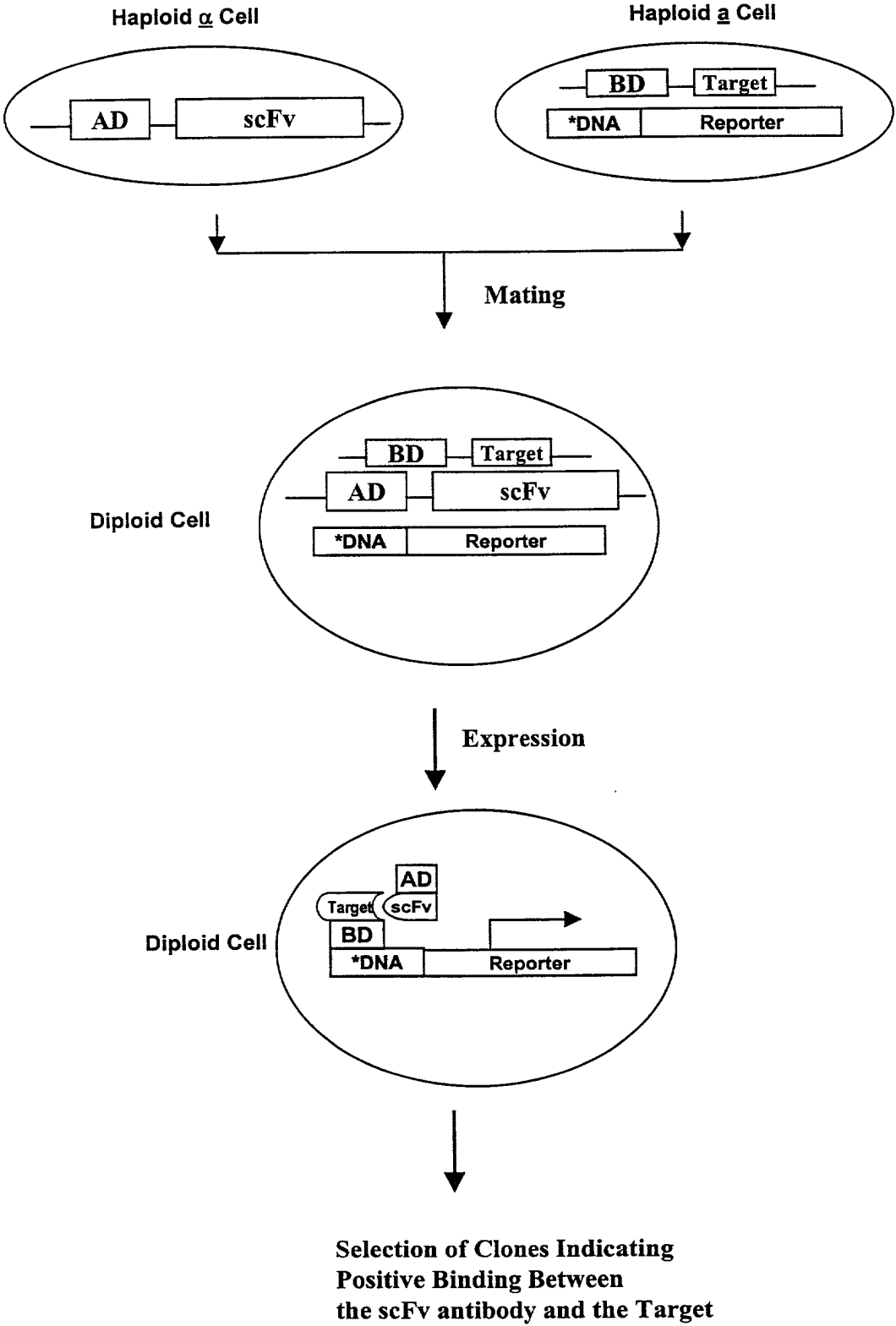


FIGURE 3

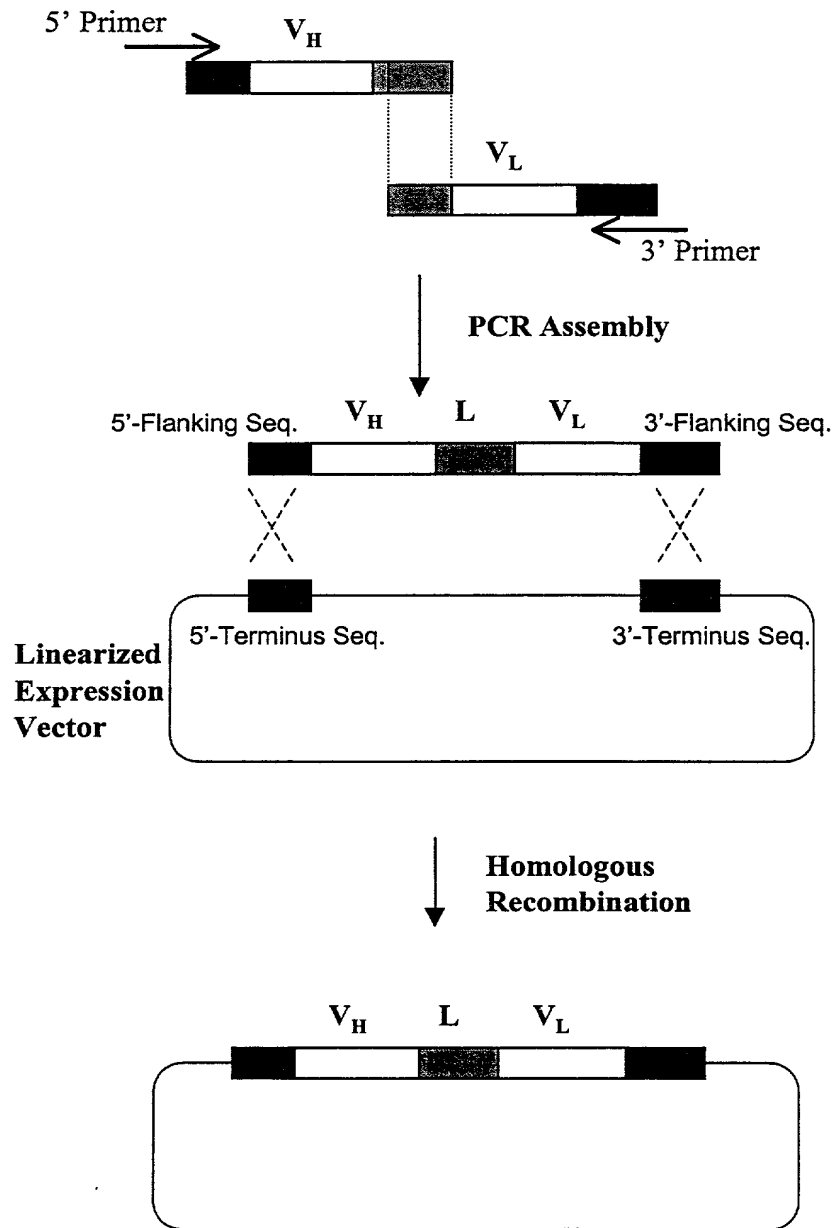


FIGURE 4

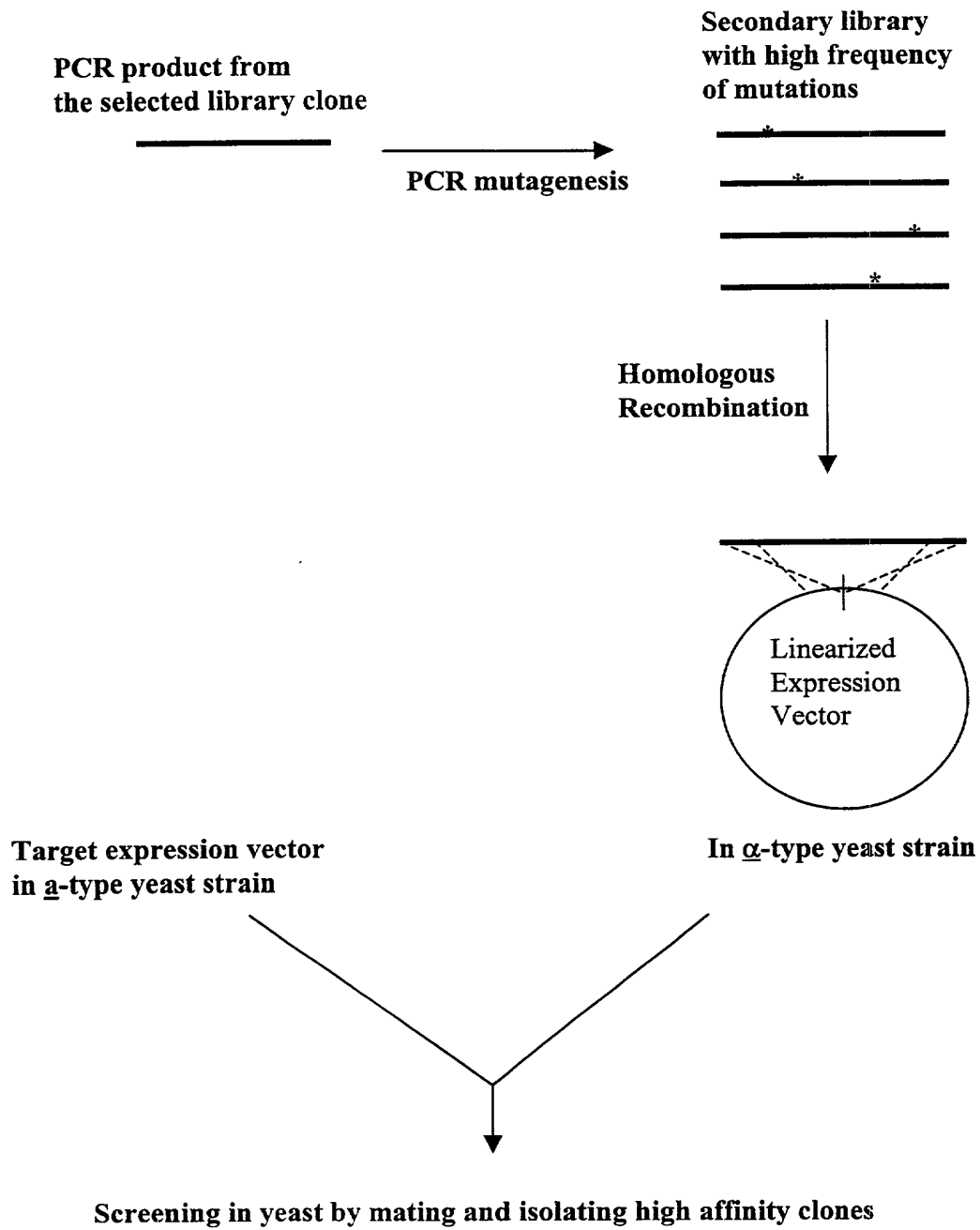


FIGURE 5

DNA sequence of clone 15.186.35 scFv against N-terminus fragment of human CCR5 [SEQ ID NO: 16]:

CAGGTTACCTTGAAGGAGTCTGGTCCTACGTTGGTGAAACCCACACAGACCCTCACGCTGACCTGCACCTTGTCTGGGTT
CTCACTCAGCACTAGTGGAGTGAGTGTGGGCTGGATCCGTCAGCCCCCAGGAAAGGCCCTTGAGTGGCTTGCAAGCATAA
ATTGGAATGATGATAAGTGCTACAGCCCATCTCTGAAAAGCAGGCTCACCATCACCAAGgACACCCCCaAAAACCAGGTG
GTCCTTGCAATGAGCAACATGGACCCTGCGGACACAGCCACATATTCCCTGTGCACTCGATATGCCCCCATGATAGTGG
CCCGCAATCTTTTGATGCTTCTGATGTCTGGGGCCAGGGACAATGGTCACCGTCTCTTCAGGCGGTGGTGGATCAGGCG
GCGGAGGATCTGGCGGAGGTGGCAGCGGTGGTGGAGGCAGTTCCTATGAGCTGATGCAGCTACCCTCAGTGTCCGTGTCC
CCAGGACAGACAGCCAGCATCACCTGCTCTGGAGATAATTTGGGGGATAAATATGCCTGCTGGTATCAACAGAAGCCAGG
CCGTTCCCTGTGCTGGTCATTTATGGAGATAACAAGCGGCCCTCAGGGATCCCTGAGCGATTCTCTGGCTCCAACCTCTG
GGAACACAGCCACTCTGACCATCAGCGGGACCCAGGCTATGGATGAGGCTGACTATTACTGTGTCAGGCGTGGGACACCAGC
ACTGCTGTCTTCGGAACCTGGGACCAAGCTCACCGTCCTA

Amino acid sequence of clone 15.186.35 scFv against N-terminus fragment of human CCR5 [SEQ ID NO: 17]:

QVTLKESGPTLVKPTQTLTLTCTLSGFSLSSTSGVSVGWIRQPPGKALEWLASINWNDDKCYSPSLKSRLTITKDTPKNQV
VLAMSNMDPADTATYSCALDMPPHDSGPQSFDASDVWGPMTVMVTVSSGGGGSGGGSGGGSGGGSSYELMQLPSVSVS
PGQTASITCSGDNLDKYACWYQQKPRSPVLVIYGDNKRPSGIPERFSGSNSGNTATLTISGTQAMDEADYYCQAWDTS
TAVFGTGTKLTVL

DNA sequence of clone 15.150.11 scFv against loop 6 fragment of human CCR5 [SEQ ID NO: 18]:

CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCGGAGACCCTGTCCCTCACTTGCAGTGTCTCTGGT3G
CTCCATCGGTTCATGACTACTGGAGCTGGATACGGCAGCCCCCAGGGGAGGGACTGGAGTGGATTGTTTCATCTTCTTCG
ATGGGAGCACCAACTACAACCCCTCCCTCAACGGTCGAGtCACCATCTCACTCGACACGTGGAAGATCAGCTCTCCCTG
AGGCTGACCTCTGTGACCGCTGCGGACACGGCCGTGTATTTCTGTGCGAGACTAAAGGGGGCGTGGTTATTGTCTGAACC
CCCTTACTTCAGCTCCGACGGCATGGACGTCTGGGGCCAAGGGACCACGGTCACCGTCCCTCAGGCGGTGGTGGATCAG
GCGGCGGAGGATCTGGCGGAGGTGGCAGCGGTGGTGGAGGCAGTAATTTTATGCTGACTCAGCCCCCTCAGCGTCTGGG
ACCCCGGGCAGAGGGTCAGCATCTCTTGTCTGGGAGCAGCTCCGACATCGGAAGTAATACTGTAACTGGTACCAGCA
ACTCCCAGGAACGGCCCCCAAACCTCCTCATCTATAGTAATAATCAGCGGCCCTCAGGGGTCCCTGACCGATTCTCTGGCT
TCAAGTCTGGCACCTCAGCCTCCCTGGTCATCAGTGGCCTCCAGTCTGAGGATGAGGCTGATTATTATTGTGCAGCATGG
GATGAGAGCCTGAATGGTGTGGTGTTCGGCGGAGGACCAAGG

Amino acid sequence of clone 15.150.11 scFv against loop 6 fragment of human CCR5 [SEQ ID NO: 19]:

QVQLQESGPGLVKPSSETLSLTCTVSGGSIGHDYWSWIRQPPGEGLEWIGFIFFDGSTNYNPSLNGRVTISLDTSKNQLSL
RLTSVTAADTAVYFCARLKGAWLLSEPPYFSSDGMVWGQTTVTVPSSGGGSGGGSGGGSGGGSNFMLTQPPSASG
TPGQRVSISSGSSSDIGSNTVNWYQQLPGTAPKLLIYSNNQRPSGVPDRFSGFKSGTSASLVISGLQSEADYYCAAW
DESLNGVVFGGGPR

FIGURE 5 (cont.)

DNA sequence of clone 15.150.12 scFv against loop 6 fragment of human CCR5 [SEQ ID NO: 20]:

CAGGTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGTCTTGGGGAACCCCTGTCCCTCACCTGCGCTGTCTCTGGTGC
GTCGTTTAGTGGTtATTATTGGAGCTGGATCCGCCAGCCCCAGGgAAGGGGCTGGAGTGGATTGGGGAGATCAATCATC
GTGGAAGCACTACCTACAACCCGTCCCTCGACGGTCGAGTCACCATATCATTAGACACATCTACCAACCAGATCTCCCTT
AAACTGACCTCTATGACCGCCGCGGACACGGCCGTGTATTACTGTGCGAGGACAGTGGCTGGTACTAGTGACTACTGGGG
CCAGGGAACCCCTGGTCACCGTTTTCTCAGGGAGTGCATCCGCCCAACGGGCGGTGGTGGATCAGGCGGCGGAGGATCTG
GCGGAGGTGGCAGCGGTGGTGGAGGCAGTAAACGACACTCACGCAGTCTCCAGCATTTCATGTGAGCGACTCCAGGAGAC
AAAGTCAGCATCTCCTGCAAAGCCAGCCGAGACGTTGATGATGATGTGAAGTGGTACCAACAGAGACCAGGAGAAGCTCc
TATTTTcATTATTGAAGATGCTACTACTCTCGTTCCtTGAATCTCACCTCGATTTCAGTGGCAGCGGGTATGGAACCGATT
TTACCCTCACAATTAATAACATCGATTCTGAGGATGCTGCATATTATTCTGTCTACAACATGATAATTTCCCGCTCACC
TTCGGCGGAGGGACCAAGGTGGAGATCAAA

Amino acid sequence of clone 15.150.12 scFv against loop 6 fragment of human CCR5 [SEQ ID NO: 21]:

QVQLQQWGAGLLKSWGTLSTCAVSGASFSGYYWSWIRQPPGKLEWIGEINHRGSTTYNPSLDGRVTISLDTSTNQISL
KLTSMTAADTAVYYCARTVAGTSDYWGQGLVTVSSGSASAPTGGGSGGGSGGGSGGGGSKTTLTQSPAFMSATPGD
KVSISCKASRDVDDVDNWWYQQRPEAPIFIIEDATTLVPGISPRFSGSGYGTDFTLTINNIDSEDAAYYFCLQHDNFPLT
FGGGTKVEIK

DNA sequence of clone 15.150.24 scFv against loop 6 fragment of human CCR5 [SEQ ID NO: 22]:

CAGGTACACCTTGAAGGAGTCTGGTCCTACGCTGGTGAAACCCACACAGACCCTCACGCTGACCTGCACCTTCTCTGGGTT
CTCACTCAGAACTACTGGAGAGGGTGTGGGCTGGGTCCGTGAGCCCCAGGAAAGGCCCTGGAATGGCTTGCACTCATTT
ATTGGGATGATGATAAGCGCTACAGCCCATCTCTGAAGAGCAGGCTCACCATCACCAAGGACACCTCCAAAAAGCAGGTG
GTCCTTACAATGACCAACGTGGACCCAGCGGACACAGCCACCTATTACTGTACACACGAGCAATACTATTATGATACTAG
TGGTCAGCCATACTACTTTGACTTCTGGGGCCAGGGCACCCCTGGTCACCGTCTCCTCAGGCGGTGGTGGATCAGGCGGCG
GAGGATCTGGCGGAGGTGGCAGCGGTGGTGGAGGCAGTAACATCCAGGTGACCCAGTCTCCATCCTCCCTGTCTGCATCT
GTAGGAGACAGAGTCACCATGACTTGCCGGGCGAGTCAGGACATTAGGAAGAATTAAATTGGTATCAGCAAAAACCAGG
GAAAGCCCCTAAGGTCTGATCTACGATGCATCCGATTTGGAAACAGGGATCCCATCAAGGTTTCAGTGGAAAGTGGATCTG
GGACAGATTTTATCCTCACCATCAGCAGCCTGCAGCCTGAAGATATTGCAACATACTACTGTCAACAGTCTGATTATTTA
CCGCTCACTTTCCGGCGGAGGGACCAAGTGGATATCAAA

Amino acid sequence of clone 15.150.24 scFv against loop 6 fragment of human CCR5 [SEQ ID NO: 23]:

QVTLKESGPTLVKPTQTLTLCTFSGFSRLTTGEGVGWVRQPPGKALEWLALIYWDDDKRYSPSLKSRLTITKDTSKKQV
VLTMTNVDPADTATYYCTHEQYYDTSQGPPYFDWVGQGLVTVSSGGGSGGGSGGGSGGGGSGGGGSGGGGSGGGGSGGGG
VGDRVMTTCRASQDIRKNLWYQQKPGKAPKVLIIYDASDLETGIPSRFSGSGSGTDFILTISSLPEDIATYYCQQSDYL
PLTFGGGTKVDIK

FIGURE 6

DNA sequence of a variant of clone 15.186.35 scFv against N-terminus fragment of human CCR5 [SEQ ID NO: 24]:

CAGGTCACCTTGAAGGAGTCTGGTCTACGTTGGTGAAACCCACACAGACCCTCACGCTGACCTGCACCTTGTCTGGGTT
CTCACTCAGCACTAGTGGAGTGAGTGTGGGCTGGATCCGTGAGCCCCAGGAAAGGCCCTTGAGTGGCTTGCAAGCATAA
ATTGGAATGATGATAAGTGCTACAGCCCATCTCTGAAAAGCAGGCTCACCATACCAAGgACACCCCCaAAAACCAGGTG
GTCCTTGCAATGAGCAACATGGACCCTGCGGACACAGCCACATATTCTGTGCACTCGATATGCCCCCATGATAGTGG
CCCGCAATCTTTTGATGCTTCTGATGTCTGGGGCCAGGGACAATGGTCACCGTCTCTTCAGGCGGTGGTGGATCAGGCG
GCGGAGGATCTGGCGGAGGTGGCAGCGGTGGTGGAGGCAGTTCTATGAGCTGATGCAGCTACCCCTCAGTGTCCGTGTCC
CCAGGACAGACAGCCAGCATCACCTGCTCTGGAGATAATTTGGGGGATAAATATGCCTGCTGGTATCAACAGAAGCCAGG
CCGGTCCCCGTGTCTGGTCAATTATGGAGATAACAAGCGGCCCTCAGGGATCCCTGAGCGATTCTCTGGCTCCAACTCTG
GGAACACAGCCACTCTGACCATCAGCGGGACCCAGGCTATGGATGAGGCTGACTATTACTGTGAGGCGTGGGACACCAGC
ACTGCTGTCTTCGGAACCTGGGACCAAGCTCACCGTCCTA

Amino acid sequence of a variant of clone 15.186.35 scFv against N-terminus fragment of human CCR5 [SEQ ID NO: 25]:

QVTLKESGPTLVKPTQTLTLTCTLSGFSLSTSGVSVGWIRQPPGKALEWLASINWNDDKCYSPSLKSRLTITKDTPKNQV
VLAMSNMDPADTATYSCALDMPHDSGPQSFSDASDVWGPMTVTVSSGGGSGGGGSGGGGSGGGGSSYELMQLPSVSVS
PGQTASITCSGDNLDKYACWYQQKPRSPVLVIYDGNKRPSGIPERFSGSNSGNTATLTISGTQAMDEADYYCQAWDTS
TAVFGTGTCLTVL

DNA sequence of a variant of clone 15.150.11 scFv against loop 6 fragment of human CCR5 [SEQ ID NO: 26]:

CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCGGAGACCCTGTCCCTCACTTGCAGCTGTCTCTGGTGG
CTCCATCGGTCACTACTGGAGCTGGATACGGCAGCCCCCAGGGGAGGGACTGGAGTGGATTGGTTTTCATCTTCTTCG
ATGGGAGCACCAACTACAACCCCTCCCTCAACGGTCGAGtCACCATCTCACTCGACACGTCGAAGAATCAGCTCTCCCTG
AGGCTGACCTCTGTGACCGCTGCGGACACGGCCGTGTATTTCTGTGCGAGACTAAAGGGGGCGTGGTTATTGTCTGAACC
CCCTTACTTCAGCTCCGACGGCATGGACGTCTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGCGGTGGTGGATCAG
GCGGCGGAGGATCTGGCGGAGGTGGCAGCGGTGGTGGAGGCAGTAATTTTATGCTGACTCAGCCCCCTCAGCGTCTGGG
ACCCCCGGGCAGAGGGTCAGCATCTCTTGTCTGGGAGCAGCTCCGACATCGGAAGTAATACTGTAAACTGGTACCAGCA
ACTCCCAGGAACGGCCCCAACTCCTCATCTATAGTAATAATCAGCGGCCCTCAGGGGTCCCTGACCGATTCTCTGGCT
TCAAGTCTGGCACCTCAGCCTCCCTGGTCATCAGTGGCCTCCAGTCTGAGGATGAGGCTGATTATTATTGTGCAGCATGG
GATGAGAGCCTGAATGGTGTGGTGTTCGGCGGAGGAACCAAGGTGACCGTCCTA

Amino acid sequence of a variant of clone 15.150.11 scFv against loop 6 fragment of human CCR5 [SEQ ID NO: 27]:

QVQLQESGPGLVKPSSETLSLTCTVSGGSIGHDYWSWIRQPPGEGLEWIGFIFFDGSTNYPNPSLNGRVTISLDTSKNQLSL
RLTSVTAADTAVYFCARLKGAWLLSEPPYFSSDGMVDVWQGTTTVTVSSGGGSGGGGSGGGGSGGGGSGNFMILTQPPSASG
TPGQRVSISSGSSSDIGSNTVNWYQQLPGTAPKLLIYSNNQRPSGVPDRFSGFKSGTSASLVISGLQSEADYYCAAW
DESLNGVVFGGGTKVTVL

FIGURE 6 (cont.)

DNA sequence of a variant of clone 15.150.12 scFv against loop 6 fragment of human CCR5 [SEQ ID NO: 28]:

CAGGTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGTCTTGGGGAACCCCTGTCCCTCACCTGCGCTGTCTCTGGTG
GTCGTTTAGTGGTtATTATTGGAGCTGGATCCGCCAGCCCCAGGgAAGGGGCTGGAGTGGATTGGGGAGATCAATCATC
GTGGAAGCACTACCTACAACCCGTCCCTCGACGGTTCGAGTCACCATATCATTAGACACATCTACCAACCAGATCTCCCTT
AAACTGACCTCTATGACCGCCGCGGACACGGCCGTGTATTACTGTGCGAGGACAGTGGCTGGTACTAGTGACTACTGGGG
CCAGGGAACCCCTGGTCACCGTTTCTCAGGGAGTGCATCCGCCCAACGGGCGGTGGTGGATCAGGCGGCGGAGGATCTG
GCGGAGGTGGCAGCGGTGGTGGAGGCAGTGAAACGACACTCACGCAGTCTCCAGCATTTCATGTCAGCGACTCCAGGAGAC
AAAGTCAGCATCTCCTGCAAAGCCAGCCGAGACGTTGATGATGATGTGAACCTGGTACCAACAGAGACCAGGAGAAGCTCc
TATTTTcATTATTGAAGATGCTACTACTCTCGTTTCcTGGAACTCTACCTCGATTTCAGTGGCAGCGGTATGGAACCGATT
TTACCCTCACAATTAATAACATCGATTCTGAGGATGCTGCATATTATTTCTGTCTACAACATGATAATTTCCCGCTCACC
TTCGGCGGAGGGACCAAGGTGGAGATCAAA

Amino acid sequence of a variant of clone 15.150.12 scFv against loop 6 fragment of human CCR5 [SEQ ID NO: 29]:

QVQLQQWGAGLLKSWGTLSTCAVSGASFSGYYWSWIRQPPGKLEWIGEINHRGSTTYNPSLDGRVTISLDTSTNQISL
KLTSMTAADTAVYYCARTVAGTSDYWQGTLVTVSSGSASAPTGGGSGGGGSGGGGSGGGGSETTLTQSPAFMSATPGD
KVSISCKASRDVDDVDNWWYQQRPEAPIFIIEDATTLVPGISPRFSGSGYGTDFTLTINNIDSEDAAYYFCLQHDNFP
LTFGGTKVEIK

DNA sequence of a variant of clone 15.150.24 scFv against loop 6 fragment of human CCR5 [SEQ ID NO: 30]:

CAGGTCACCTTGAAGGAGTCTGGTCCTACGCTGGTGAAACCCACACAGACCCCTCACGCTGACCTGCACCTTCTCTGGGTT
CTCACTCAGAACTACTGGAGAGGGTGTGGGCTGGGTCCGTTCAGCCCCCAGGAAAGGCCCTGGAATGGCTTGCACTCATT
ATTGGGATGATGATAAGCGCTACAGCCCATCTCTGAAGAGCAGGCTCACCATCACCAGGACACCTCCAAAAAGCAGGTG
GTCCTTACAATGACCAACGTGGACCCAGCGGACACAGCCACCTATTACTGTACACACGAGCAATACTATTATGATACTAG
TGGTCAGCCATACTACTTTGACTTCTGGGGCCAGGGCACCCCTGGTCACCGTCTCCTCAGGCGGTGGTGGATCAGGCGGCG
GAGGATCTGGCGGAGGTGGCAGCGGTGGTGGAGGCAGTAACATCCAGGTGACCCAGTCTCCATCCTCCCTGTCTGCATCT
GTAGGAGACAGAGTCACCATGACTTGCCGGGCGAGTCAGGACATTAGGAAGAATTTAAATTGGTATCAGCAAAAACCAGG
GAAAGCCCCTAAGGTCTGATCTACGATGCATCCGATTTGGAAACAGGGATCCCATCAAGGTTTCAGTGGAAGTGGATCTG
GGACAGATTTTATCCTCACCATCAGCAGCCTGCAGCCTGAAGATATTGCAACATACTACTGTCAACAGTCTGATTATTTA
CCGCTCACTTTCCGGCGGAGGGACCAAGTGGATATCAAA

Amino acid sequence of a variant of clone 15.150.24 scFv against loop 6 fragment of human CCR5 [SEQ ID NO: 31]:

QVTLKESGPTLVKPTQTLTLTCTFSGFSLRTTGEVGVWVRQPPGKALEWLALIYWDDDKRYSPSLKSRLLTITKDTSKKQV
VLTMTNVDPADTATYYCTHEQYYDTSGQPYFDFWQGTLVTVSSGGGSGGGGSGGGGSGGGGNIQVTQSPSSLAS
VGDRVMTTCRASQDIRKNLNWYQKPKAPKVLIIYDASDLETGIPSRFSGSGTDFILTISLQPEDIAITYCQQSDYL
PLTFGGGTVKDIK

FIGURE 7

Amino acid sequence alignment of variants of selected scFv antibodies against loop 6 of human CCR5

V_H region:

		CDR1	CDR2	CDR3	
15.150.11	QVQLQESGPGLVKPSSETLSLTCTVSGGSI	--GHDYNSWIRQPPGEGLEWIGFIFFDGS	TNNPSLNGRVTISLDT	SKNQLSLRLTSVTAADTAVYFCARLKGAWLLSEPPYFSSDGM	DVWGQGTITVTYSS
15.150.12	QVQLQQWGAGLLKSWGTLSLTCAVSGASF	--SGYYNSWIRQPPGKLEWIGEINHRG	STTYNPSLDGRVTISLDT	STNQISLKLTSMTAADTAVYFCART	-----VAGTSDYWGQGTILVTYSS
15.150.24	QVTLKESGFTLVKPTQTLTLCTFSGFSLRTT	GEGVGRQPPGKALEWLIYWDDDKRYS	PSLSRLTI	TKDTSKKQVLTMTNVDPADTATYCTHEQ	YYYDTSGQPY-----FDFWGQGTILVTYSS

V_L region:

		CDR1	CDR2	CDR3		
15.150.11	NFMLTQPPS-ASGTPGQRVSI	SCSGSS--DIGSNTVNWYQQLPGTAPKLLI	YNNQRP	SGVDPDRFSGFKSGTSASL	VISGLOSEADYYCAWDESLNGVFGG	TKVTVL
15.150.12	ETTLTQSPAFMSATPGDKVISCKASR	--DVDDD-VNMYQRPGEAPIFI	EDATTLVPGISPRFSGSGYGTDF	TLTINNIDSEDAAYYFC	LQHDNF--PLTFGGG	TKVEIK
15.150.24	NIQVTQSPSSLSASVGRVTMTCRASQ	--DI-RKNLNWYQKPGKAPKVLII	DASDLETGIPSRFSGSGSGTDF	ILTISSLPEDIA	TYTCCQSD-YL-PLTFGGG	TKVDIK

FIGURE 8

Amino acid sequences of variable regions of clone 15.186.35 scFv against N-terminus fragment of human CCR5

V_H region [SEQ ID NO: 34]:

QVTLKESGPTLVKPTQTLTLTCTLSGFSLSLTSVSVGWIRQPPGKALEWLASINWNDDKCYSPLKSRLTITKDTPKNQV
VLAMSNMDPADTATYSCALDMPHDSGPQSFDASDVWGPMTMTVSS

V_L region [SEQ ID NO: 35]:

SYELMQLPSVSVSPGQTASITCSGDNLDGYACWYQQKPGRSPVLVIYGDNKRPSGIPERFSGSNSGNTATLTISGTQAM
DEADYYCQAWDTSTAVFGTGTCLTVL

Partial amino acid sequences of variable regions of clone 15.150.11 scFv against loop 6 fragment of human CCR5

V_H region [SEQ ID NO: 36]:

QVQLQESGPGPLVKPSETLSLTCTVSGGSIGHDYWSWIRQPPGEGLEWIGFIFFDGSTNYPNPSLNGRVTISLDTSKNQLSL
RLTSVTAADTAVYFCARLKGAWLLSEPPYFSSDGMVWVGQGTTVTV

V_L region [SEQ ID NO: 37]:

NFMLTQPPSAXGTPGQRVSISSGSSSDIGSNTVNWYQQLPGTAPKLLIYSNNQRPSGVPDRFSGFKSGTSASLVISGLQ
SEDEADYYCAAWDESLNGVVFGGG

Partial amino acid sequences of variable regions of clone 15.150.12 scFv against loop 6 fragment of human CCR5

V_H region [SEQ ID NO: 38]:

QVQLQWAGALLKSWGTLTLTCAVSGASFSGYYSWIRQPPGKLEWIGEINHRGSTTYPNPSLDGRVTISLDTSTNQISL
KLTSMTAADTAVYYCARTVAGTSDYWGQGTTLTVSS

V_L region [SEQ ID NO: 39]:

TTLTQSPAFMSATPGDKVISCKASRDVDDVDNWWYQQRPGAPFIIFEDATTLVPGISPRFSGSGYGTDFTLTINNIDS
EDAAYYFCLQHDNFPLTFGGGTKVEIK

Amino acid sequences of variable regions of clone 15.150.24 scFv against loop 6 fragment of human CCR5

V_H region [SEQ ID NO: 40]:

QVTLKESGPTLVKPTQTLTLTCTFSGFSRLTTGEGVGWVRQPPGKALEWLALIWDDDKRYSPLKSRLTITKDTSKKQV
VLTMTNVDPADTATYYCTHEQYYDTSGQPYFDFWVGQGTTLTVSS

V_L region [SEQ ID NO: 41]:

NIQVTQSPSSLSASVGDRTMTCRASQDIRKNLNWYQQKPGKAPKVLIIYDASDLETGIPSRFSGSGSGTDFILTISLQP
EDIATYYCQSDYLPLTFGGGTKVDIK

FIGURE 9A

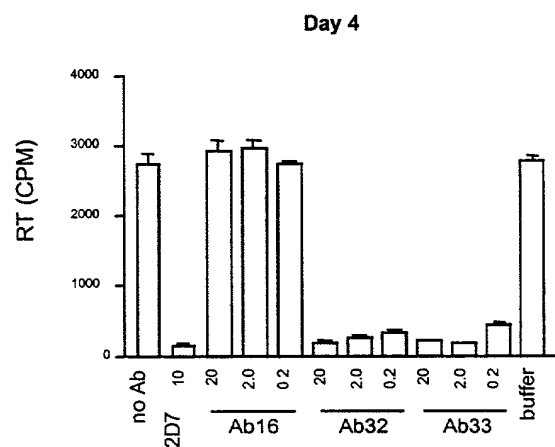


FIGURE 9B

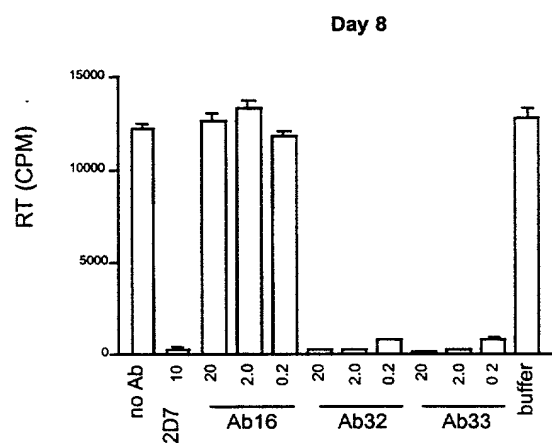


FIGURE 9C

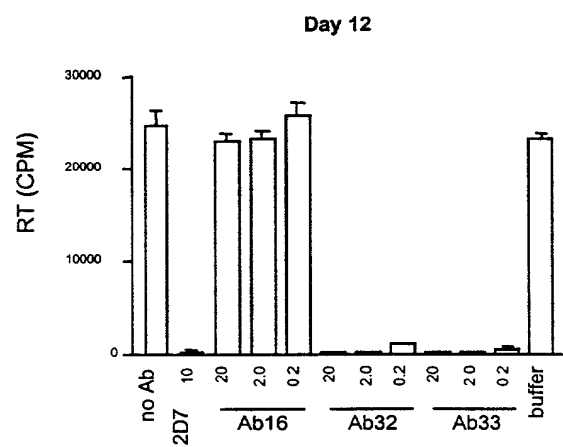


FIGURE 10A

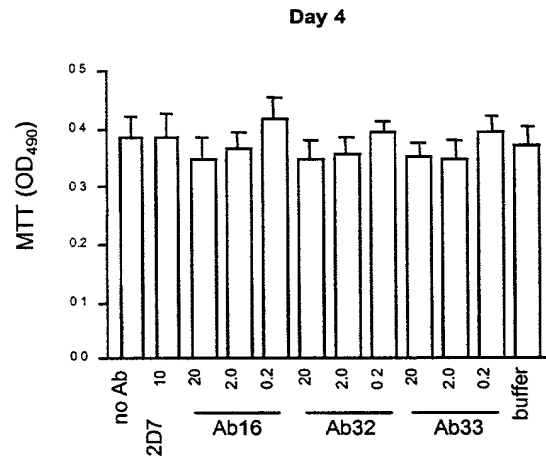


FIGURE 10B

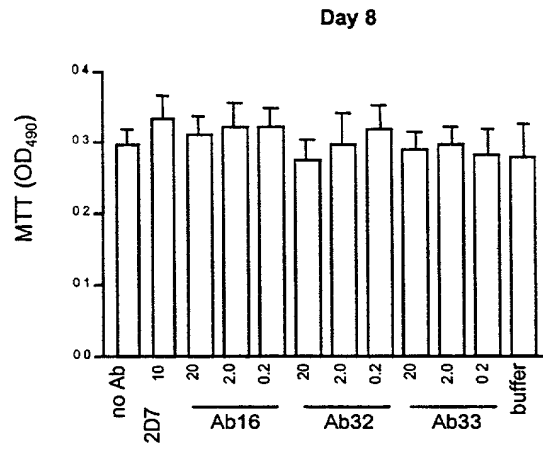


FIGURE 10C

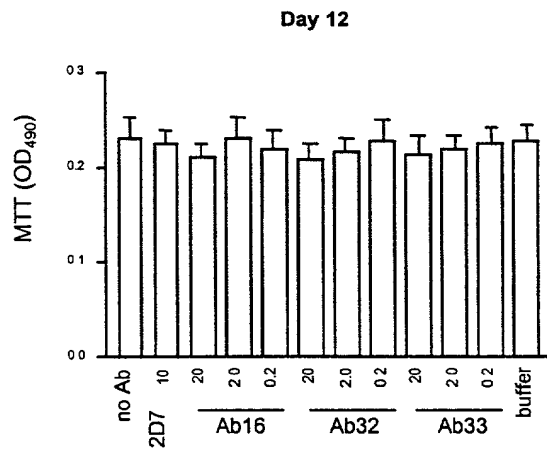


FIGURE 11A

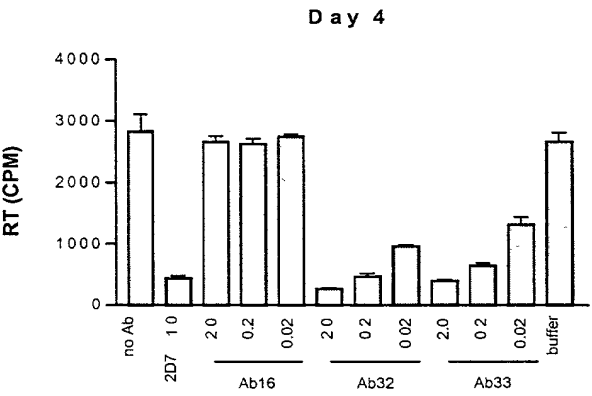


FIGURE 11B

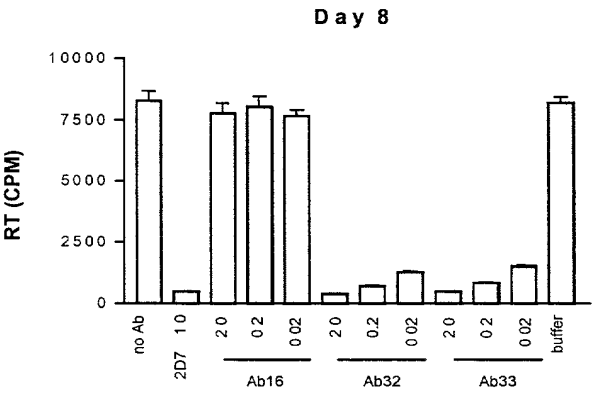


FIGURE 11C

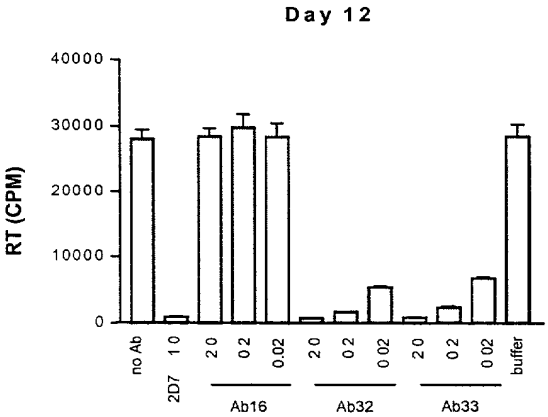


FIGURE 12

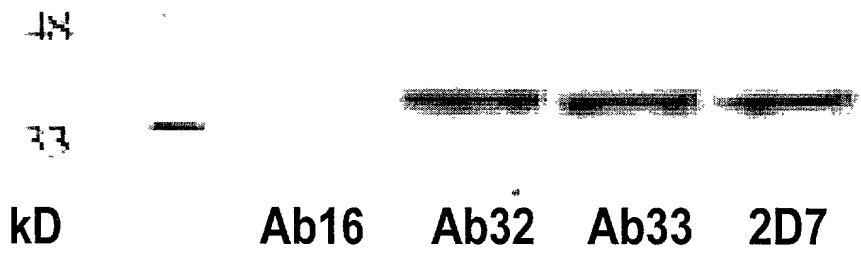


FIGURE 13

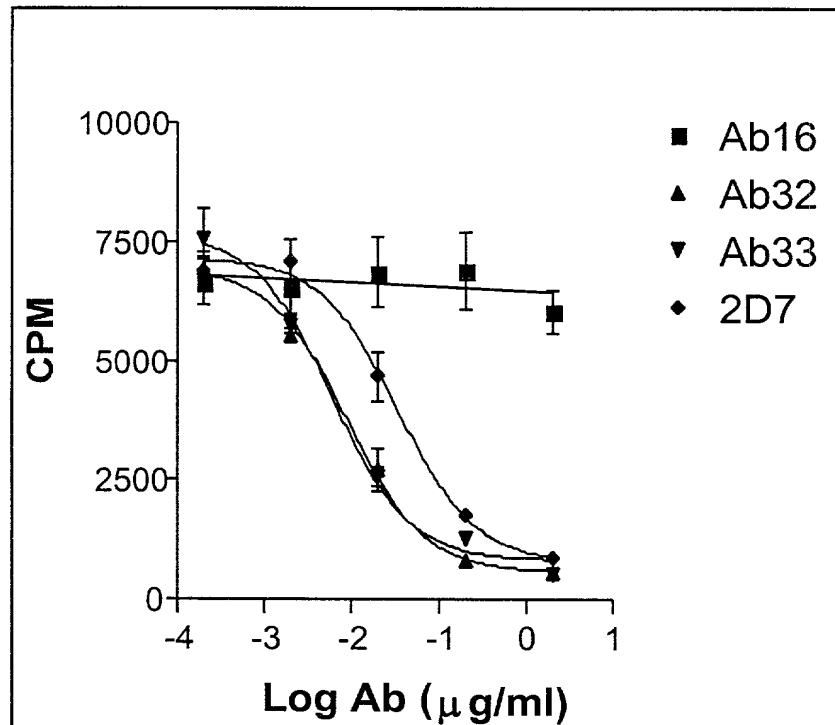


FIGURE 14

